



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,297	06/30/2004	Hitoshi MATSUMOTO	Q82169	4296
23373	7590	06/06/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			NGUYEN, THINH H	
			ART UNIT	PAPER NUMBER
			2861	

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/710,297		MATSUMOTO ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Thinh H. Nguyen		2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 6-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____  | 6) <input type="checkbox"/> Other: ____                                     |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 2861

4. Claims 1-5 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murray et al. US 5,610,635 in view of Hirst et al. US 5,930,553.

Murray et al. discloses, regarding claim 1, a recycled ink cartridge (figures 2 and 3) manufactured by recycling a used ink cartridge (as explained in column 13, lines 27-31 the ink cartridge is periodically refilled for reuse which is equivalent to being recycled), the recycled ink cartridge comprising:

a container having an ink chamber (52) for containing ink therein (figure 2);

an ink supply port in fluid communication with the ink chamber (although not explicitly indicated this is implicitly necessary for the refilling discussed in column 13, lines 27-31 ); and

a memory device (48) which stores data (ink type and color) related to an exchange of a part (ink liquid), by a recycling operation, of the used ink cartridge (column 3, lines 30-35).

Regarding claim 4, the memory device (48) stores data (drop count) related to the ordinal number of a recycling operation carried out by the used ink cartridge (as explained in column 13, lines 15-35 the number of ink drops expelled is stored in the memory and is related to the number of refill operations carried out by the ink cartridge).

Regarding claim 9, the memory device stores data indicative of a minimum amount of ink (amount of remaining ink) held in the cartridge (column 10, lines 6-7).

Murray et al. fails to disclose, regarding claims 1-3, that the memory device stores data indicative of when the used ink cartridge was recycled including data indicative of the date of recycling or the date of refilling.

Art Unit: 2861

Hirst et al. provides teachings relevant to recycling of print consumables such as ink cartridges and memory devices associated with the cartridges (abstract, column 4, lines 7-23). Hirst et al. teaches transferring data indicating the date of recycling/refilling from a computer to a memory device on a print consumable (column 5, lines 7-10, column 6, lines 4-20, figures 4-6).

It would have been obvious to a person of ordinary skill in the inkjet art at the time of the invention to include data indicative of when the used ink cartridge was recycled/refilled, as taught by Hirst et al., in the memory device of Murray et al. The motivation for doing so would have been to help the remanufacture who recycles the ink cartridge to generate and gather statistics for future re-manufacturing as indicated by column 1, lines 25-40 of Hirst et al.

5. Claims 1, 2, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Childers et al. US 6,126,265 in view of Hirst et al. US 5,930,553.

Childers et al. discloses, regarding claim 1, an ink cartridge (figures 2 and 3) comprising:

- a container having an ink chamber (26) for containing ink therein (figure 2);
- an ink supply port (50) in fluid communication with the ink chamber (figure 3, column 5, lines 5-9); and
- a memory device (28).

Regarding claim 6, the memory device (28) stores data (flushing frequency) related to a method of charging ink into a printhead (12) from the ink cartridge (as explained in column 5, lines 34-36 and column 6, lines 42-55 cleaning methods for the

Art Unit: 2861

printhead and flushing parameters for such methods are stored in the ink cartridge memory).

Regarding claim 7, the memory device stores data (number of spits, drops fired, flushing frequency) related to an amount of ink drawn via the printhead from the ink cartridge (column 5, lines 21-35).

Childers et al. fails to disclose, regarding claims 1 and 2, that the ink cartridge was recycled or that the memory device stores data indicative of when the ink cartridge was recycled including data indicative of the date of recycling.

Hirst et al. provides teachings relevant to recycling of print consumables such as ink cartridges and memory devices associated with the cartridges (abstract, column 4, lines 7-23). Hirst et al. teaches transferring data indicating the date of recycling to a memory device on a print consumable (column 5, lines 7-10, column 6, lines 4-20, figures 4-6). It would have been obvious to a person of ordinary skill in the inkjet art at the time of the invention to recycle the ink cartridge of Childers et al. and include data indicative of when the ink cartridge was recycled, as suggested by Hirst et al., in the memory device of the ink cartridge. The motivation for doing so would have been to avoid waste and to help the re-manufacturer who recycles the ink cartridge gather statistics as indicated by column 1, lines 25-40 of Hirst et al.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murray et al. US 5,610,635 in view of Hirst et al. US 5,930,553 as applied to claims 1-5, and 9 above, and further in view of over Ujita et al. US 5,506,611.

Art Unit: 2861

Murray et al., as modified by Hirst et al. disclose the instant claimed memory device except that the memory device is provided on a circuit board containing electrical contacts, said memory device provided on a surface of said circuit board that is opposite to a surface containing said electrical contacts.

Ujita et al. an ink cartridge (figure 11) comprising a memory device (30) provided on a circuit board (31) containing electrical contacts (as shown as contact 34 which is part of connectors 32, 33), said memory device (30) provided on a surface of the circuit board (31) opposite to a surface containing the electrical contacts (34) (figures 10, 11; column 16, lines 44-50). It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt the contact type as taught by Ujita et al. in Murray et al., as modified by Hirst et al. as such modification would provide versatility to the circuit board layout where components are on one side of the board and contacts, solder points are on the opposite side.



Art Unit: 2861

***Patent Application Information Retrieval (PAIR)***

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Contact Information**

8. Any inquiry concerning this communication should be directed to examiner Thinh Nguyen at telephone number (571) 272-2257. The examiner can generally be reached Mon-Wed, and Thurs from 9:00A – 5:00P. The official fax phone number for the organization is (703) 872-9306. The examiner supervisor, Dave Talbott, can also be reached at (571) 272-1934.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 308-1782.



Thinh Nguyen

June 1, 2005

Thinh Nguyen  
Primary Examiner  
Technology Center 2800